With cordial greetings
C.D.O'M.

pam (B) IVES

The "Relation" of Andreas Vesalius on the Death of Henry II of France

CHARLES DONALD O'MALLEY

and

J. B. deC. M. SAUNDERS

Reprinted from Vol. III of the Spring 1948 Issue, History of Journal of Medicine.

pam (B) IVES

22501414421

Figure I—Henry II, King of France, from the engraving of Étienne de Laulne (1510-1595)

The "Relation" of Andreas Vesalius on the Death of Henry II of France

CHARLES DONALD O'MALLEY

and

J. B. deC. M. SAUNDERS*

TRAGEDY in one form or another was the constant companion of the House of Valois. Scarcely a dozen years had elapsed since the sole remaining son of Francis I had followed on its way to Saint-Denis the melancholy cortege which marked the funeral of his father, as earlier ones had indicated the passing of his brothers, Francis and Charles. And now the sceptered pall would once more be required for the only survivor of the immediate family of the "First Gentleman of France."

On July 30, 1559, Henry II of France was wounded in a joust and subsequently died as a result of his injuries. The incident was the untoward outcome of the treaty of Cateau-Cambrésis and this unforeseen tragedy, despite the personal insignificance of Henry, who, as far as monarchs may be evaluated, was no considerable loss to France, was to set in motion a chain of events of the utmost political significance.[1] To the historian of medicine, the incident is of singular importance and interest because of the distinction of the notable group of physicians who

* From the Department of History, Stanford University, Palo Alto, California and the Division of Medical History and Bibliography, University of California, San Francisco.

[1] The unforeseen death of Henry left his fifteen-year-old son Francis as nominal king. Already the husband of Mary Queen of Scots, whose mother, Mary of Guise, had been the wife of the Stuart James V, Francis was therefore allied by marriage to the Guise family who now, with the forces of France and of Scotland united, sought the English throne for Mary Stuart. Politics were masked by religion, and Catholics refused to recognize the validity of Elizabeth's claim. The result was bitter persecution by both sides, a Calvinist rising in Scotland, incited by John Knox, and the eventual execution of Mary and the establishment of the Presbyterian church organization. In France politics, this time on a more local and national scale, were rampant and again disguised by religion. With a youth for king and a woman (Catherine de' Medici) for regent, the nobility saw its opportunity to regain those powers previously lost to the strong centralizing monarchs. With three youthful sons of Henry as successive monarchs, the nobility and the churches—Catholic and Calvinist—were determined to make the most of their opportunity. Hence the dreary interval of civil war in France with now Catholic and now Huguenot (according as each saw his opportunity for political gain) rebelling against royal authority until finally, and only after a series of desolating wars, a strong ruler, Henry IV, was once more established on the French throne.

gathered at the bedside of the injured monarch. From them, as well as from the memoirs and writings of other lay and ecclesiastical personages of the times, we possess several accounts of the affair. To these must now be added the postmortem *Relation* of Andreas Vesalius which seems to have been entirely neglected by historians of medicine and biographers of the eminent anatomist.

Henry II as king was not a dominant force. Content to live under the personal influence of his crafty and unscrupulous wife, Catherine de' Medici, and of his bold and possessive mistress, Diane de Poitiers, he permitted the government to become the object of dispute between the two powerful families of Montmorency and Guise. In general, the former may be called the party of peace and had certain leanings toward the reform movement, while the latter saw its opportunity in war and was staunchly Catholic.

At this period the ruler of Spain was Philip II, not a bellicose monarch. Indeed, peaceful relations between France and Spain had been established by the truce of Vaucelles in February 1556, and the outbreak of the new war in the same year was an inexcusable breach of the peace by France which had been strongly urged to this step by the Pope Paul IV, who was guided solely by personal desire and hatred of Spain.

The war at first went badly for France which suffered overwhelming defeat at St. Quentin, a campaign, incidentally, described by Ambroise Paré.[2] As a consequence of defeat, the fortunes of the Montmorency, who held the leadership and therefore the responsibility, suffered decline. But under the new leadership of Francis of Guise, a decided change of fortune occurred late in 1557, and defeat was solaced by victory with the siege and capture of Calais, the last of the English possessions in France; for the English under Queen Mary, wife of Philip II, were in alliance with Spain.

Yet by 1558 both France and Spain were desperately desirous of peace. From the beginning, Philip had had no strong inclination for war, and now both monarchs were exceedingly hard-pressed to obtain military funds and supplies. The result was the treaty of Cateau-Cambrésis. Whether this peace indicated victory or defeat for either contestant is here beside the point.[3] What is of importance for us is the fact that, in the

[2] A. Paré, *The Workes of that famous Chirurgion Ambrose Parey.* (London, 1634), XXIX *(Voyages)*, pp. 771-772.

[3] Briefly, this peace meant the end of a struggle some sixty years long which would never be resumed in its same form. Savoy was established as a buffer state between France and Italy under Spanish control, and the Dukes of Savoy in the centuries to follow were to use this position to good advantage, and eventually it was to play

tradition of the age, it was felt that dynastic marriage would assist the improvement of relations between the erstwhile enemies. As a result, Philip II, whose English wife had in the meanwhile died, was married to Elizabeth of France, daughter of Henry II, and Emmanuel Philibert of Savoy married Marguerite, sister of the French king. It was in conjunction with the celebration of these marriages in Paris that Henry II was to meet his death.

The marriage of the Spanish ruler and Henry's daughter was to be solemnized on June 22, 1559, and that of the Duke of Savoy and Marguerite on July 1. The Duke of Savoy would be present for his marriage, but Philip, represented by the Duke of Alva as a proxy, was apparently content to gaze upon the portrait of his bride which had been sent to him at Brussels by the French king and was hung in his private chamber.[4]

Henry was determined that no effort should be spared on an occasion of such tremendous importance, and preparations for the event were in progress throughout May and June. "The king," wrote the English ambassador, "has borrowed 1,100,000 crowns to defray the setting out of these triumphs and for the entertaining of the princes which come hither."[5] A little later the same observer wrote that "the Duke of Alva and the other Spanish commissioners are looked for within four or five days. Great preparations are made for them at Chantilly and Ecouen, two houses of the Constable [Montmorency]. Here the king himself, the dauphin, and the nobles and gentry of the court do daily essay themselves at the tilt which is like to be very grand and sumptuous, with great triumph and solemnity."[6]

The Duke of Alva, in company with William of Nassau, Prince of

no small part in bringing about a united Italy. The treaty made concessions to France in the east in the area between the Netherlands and the northern slopes of the Alps. The result of this was to focus attention and to bring international conflict to this area during the seventeenth century. In short, the peace of Cateau-Cambrésis marked the end of one era and the beginning of another. It is interesting to note that within the space of one year so many of the actors in the previous scene had passed from the stage—Henry II, Mary of England, Charles V, Paul IV—while in the same period the marriages of the Spanish Habsburg, Valois and Savoy were to have such important implications for the new and future era. On the whole question of this war and peace *cf.* Henry Lemmonier, *La lutte contre la maison d'Autriche. La France sous Henri II (Histoire de France,* ed. Ernest Lavisse, V, pt. ii), pp. 161ff.

[4] L. Romier, *Les origines politiques des guerres de religion* (Paris, 1914), II, p. 377.

[5] *Calendar of state papers, foreign series, of the reign of Elizabeth,* ed. Joseph Stevenson (London, 1863), vol. I, p. 303, Throckmorton to Sir Wm. Cecil, June 6, 1559.

[6] Patrick Forbes, *A full view of the public transactions in the reign of Elizabeth* (London, 1740), vol. I, p. 122, Throckmorton to the Privy Council, June 10, 1559.

Orange, the Duke of Egmont,[7] and a brilliant retinue of nobles, arrived on June 15. They were first greeted at Saint-Denis by the Cardinal of Lorraine, and at Chantilly by Henry himself. Celebration was now to follow celebration and in particular tournaments and jousts in which the princes and nobles might distinguish themselves. The court was lodged at the Hôtel des Tournelles, on what is now the Place des Vosges. Before this palace and in the widest part of the Rue Saint-Antoine the paving had been torn up for the construction of the lists, and galleries were built for the spectators at either end.[8]

On June 21 the betrothal of Philip II and the Princess Elizabeth took place in the great hall of the Louvre. This was followed on the next day by the marriage ceremony which was performed at Notre-Dame with great pomp and magnificence. The occasion ended with a banquet, which, however, was somewhat marred by the failure of Francis of Montmorency, who on this occasion had assumed his father's rôle of Grand-Master, to reserve places for several of the invited dignitaries.

The next cause for celebration would be the marriage of the Duke of Savoy to Marguerite. The Duke had arrived in Paris in time for the previous ceremony of betrothal, and on June 28 the second marriage contract was signed. With a curious resurgence of mediæval chivalry, the ceremonies were followed by a three days' tournament—its fatal result was to make it the last ever held by the court of France.

On Friday, June 30, the third day of the tourney, the King, wearing the black and white colours of his mistress, Diane de Poitiers, entered the lists in company with Francis of Guise, Alfonso d'Este,[9] the Duke of Ferrara, the Duke of Savoy, and the Duke of Nemours. Although it was properly the duty of Boisy, the Grand Equerry, to equip the king, on

[7] Vesalius stood high in the esteem of the Egmont family and was often called in as an adviser in times of illness. At the request of the young Duke's wife, he had performed an autopsy on the body of a young noblewoman who was suspected of having been poisoned by her uncle. However, death was established as having been due to natural causes. The opportunity was utilized by Vesalius to establish the existence of the hymen, a matter of considerable dispute at this time. In 1548, he had also predicted the death of Maximillian of Egmont, Count of Buren and a member of a collateral branch. It was the accuracy of this prediction which established and greatly extended his reputation as a physician. Vesalius, *Epistola, rationem modumque propinandi radicis Chynae decocti* . . . (Basileae, 1546), p. 141. De Thou, *Histoire universelle* . . . (London, 1734), I, p. 364.

[8] Forbes (Note 6), p. 142, Throckmorton to the Privy Council, June 21, 1559. A defiance against all comers was published at the end of May and carried the names of the king, the Duke of Ferrara, the Duke of Guise, and the Duke of Nemours; *cf.* Alphonse de Ruble, *Antoine de Bourbon et Jeanne d'Albret* (Paris, 1881), I, p. 320.

[9] It was at a consultation held at Ratisbon in July 1546, over the illness of a relative, Francesco D'Este, that Giambattista Canano (1515-1578), the eminent anatomist of Ferrara, made the portentous announcement to Vesalius of his discovery of the venous valves.

this occasion Henry gave that honour to Vieilleville who took the opportunity to warn him of the dire portents of the day. But Henry was impatient to meet the Duke of Savoy who was already at the barrier. The course was run without harm to the King, although the shock of the lance forced the Duke to rest himself upon his saddlebow. Next, Henry broke a lance with the Duke of Guise and then with Count of Mongonmery.[10] It appears that Henry was doubtful of his showing against Mongonmery and, fearful of losing the honours of the day, he sought a second encounter.[11]

The events which were now to follow occurred with such rapidity and concluded with such shocking surprise as to tax the reliability of witnesses in respect to continuity and precision of detail. While there are many accounts, most of them were written long after the events and so are marred by faults of memory. Two accounts, however, were written almost immediately after the fatal encounter. The English ambassador Throckmorton was present at the tourney and wrote an account of the proceedings the same evening, although he dated it July 1. The second account is that of Antoine Caraccioli, Bishop of Troyes, to Cornelio Musso, Bishop of Bitonto. Of these two accounts the latter is somewhat more detailed, but both were written entirely from the viewpoint of spectators in the galleries, which perhaps gives to them a certain impersonal precision in description of observable facts. There are, however, other accounts, perhaps not so trustworthy in this respect, but which contain certain valuable bits of information of a personal nature and were based upon last-minute conversation with the actors in the tragedy.

The significant portion of Caraccioli's account[12] runs as follows:

> The jousting lasted for some time until the king, mounted on a horse belonging to the Duke of Savoy (who, since he remained in the galleries with the ladies to watch the king, did not don his armour), and having performed and exhibited his prowess with much excellence, dispatched a gentleman to the Duke to tell him that this fine horse of his had assisted him to strike those good thrusts with the lance.[13] The Duke replied that he was delighted that his horse had been of such

[10] Gabriel de Lorges, Comte de Mongonmery, according to his signature, was born *c.* 1530, and at this period was captain of the Scottish Guard of Henry II.

[11] *Mémoires de la vie du Maréschal de Vieilleville (Nouvelle collection des mémoires pour servir à l'histoire de France,* ed. Michaud et Poujoulat, IX), Paris, 1838, p. 283.

[12] Caraccioli to Cornelio Musso in *Delle lettere di principi le quali o si scrivono da principi o a principi o ragionano di principi. Libro terzo* (Venice, 1581), pp. 194-198.

[13] The judges were the Seigneur de Tavannes and the Constable Montmorency. *Mémoires de très-noble et très-illustre Gaspard de Saulx, Seigneur de Tavannes (Mémoires pour servir à l'histoire de France,* VIII) Paris, 1838, p. 225.

service to the king, but he begged him, as did also the queen and the ladies, and the nobles who accompanied them, not to exert himself further that day, since the victory was his, the hour late,[14] the weather extremely hot, and the tournament ended.[15] The gentleman departed to carry this message to the king, whom he found prepared to run another course. He had already demanded a fresh lance, although several princes, and particularly he of Ferrara, had begged him to tilt no more that day. But his hour was at hand, and the more they entreated him the more obstinate he became, and opposed their wishes, while swearing on the faith of a gentleman that he would break one lance the more.[16] Then he ordered the Captain Lorges, a very valiant young noble and captain of the Scottish Guard, to come to him, and, when the latter approached, ordered him to run against him. This gentleman excused himself and begged the king not to command him. His Majesty became angry to the degree that Lorges turned his bridle, took a lance and tilted against the king. He struck the king on the gorget, a little below the visor; his lance was splintered, and the stump glancing upwards raised the visor, into which a splinter entered and wounded the king above the right eye. So strong and violent was the blow that the king inclined his head toward the lists, endeavouring to recover his seat, turned towards the other side of the lists, and would have fallen, if the princes and gentlemen who were at hand on foot and on horseback had not come to his aid.[17] They relieved him of his armour and found him fainting, the splinter in his eye and his

[14] It was five o'clock in the afternoon. Romier (Note 4), p. 379.

[15] A presentiment of danger seems to have caused uneasiness to several persons. The sources of this were probably the well-known impetuosity of the King and the dangers inherent in the sport, as well as the fact, known to Henry's intimates, that upon over-exertion he was subject to attacks of vertigo and had had a severe one not long before after playing tennis. Forbes (Note 6), p. 92, Throckmorton to Sir William Cecil, May 15, 1559. Vieilleville wrote in his *Mémoires,* p. 283, that while putting on Henry's helmet he had had a presentiment of danger, and that for three nights in succession he had dreamt of a fatality to the King on this day. However, this is a mild statement when compared with the flood of stories that arose respecting prophecies and premonitions of the King's fate. The most literary and at the same time the most fantastic was that of Nostradamus:

> Le lion jeune le vieux surmontera
> En champ bellique par singulier duel;
> Dans cage d'or les yeux lui crèvera;
> Deux playes une, puis mourir mort cruelle.

The *lion jeune* is Mongonmery, nearly twenty years younger than the King; the *cage d'or* is the gilded casque of the King; *deux playes une* is the internal and external wound. So much for ingenious explanation.

[16] According to the rules of the tourney, the defender of the lists must defend them against three challengers. The challenger was allowed one run. Thus Henry had acquitted himself well in defense against the Duke of Savoy and the Duke of Guise. But young Mongonmery ran the course without hesitation and broke his lance so well with Henry that it was apparently difficult to judge between them. According to Vieilleville, Henry would seem to have had suspicion that he had been bested, since "the King . . . wished to have his revenge." Mongonmery attempted to excuse himself from further combat on the ground that he was allowed only one course and that a second would be unfair to the remaining contestants. *Mémoires de Vieilleville* (Note 11), p. 283.

[17] "Which stroke was so vehement, and the pain he had withal so great, as he was much astonished, and had great ado (with reeling to and from) to keep himself on horseback." After the fatal blow the horse continued to gallop up to the gate of the Hôtel Graville, almost to the base of the platform on which the English ambassador sat. Thus Throckmorton had an excellent view of the termination of the accident. "And as I could discern, the hurt seemed not to be great; whereby I judge, he is but in little danger. Marry, I saw a splint taken out, of a good bigness; and nothing else was done to him upon the field, but I noted him to be very weak, and to have the sense of all his limbs almost benumbed; for being carried away, as he lay along, nothing covered his face, he moved neither hand nor foot, but lay as one amazed," Forbes (Note 6), p. 151, Throckmorton to the Privy Council, July 1, 1559.

face covered with blood. They sought to revive him with fresh water, rosewater and vinegar, but although he recovered consciousness, yet before he reached his chamber he fainted twice.[18] The unhappy young seigneur de Lorges, though he was wounded in his soul, by reason of the anguish which he suffered, as was the king in his body, because of his wound, when the king had recovered his senses for the first time, hastened to kneel before him, and without making any excuse or placing the blame for this upon the command of His Majesty, begged him to cut off his hand and his head. However, the good-natured king, who had no equal for kindness in his day, answered kindly that he was not angry with him, and that he had nothing to pardon, since he had obeyed his king and carried himself like a brave knight and a valiant man-at-arms.[19]

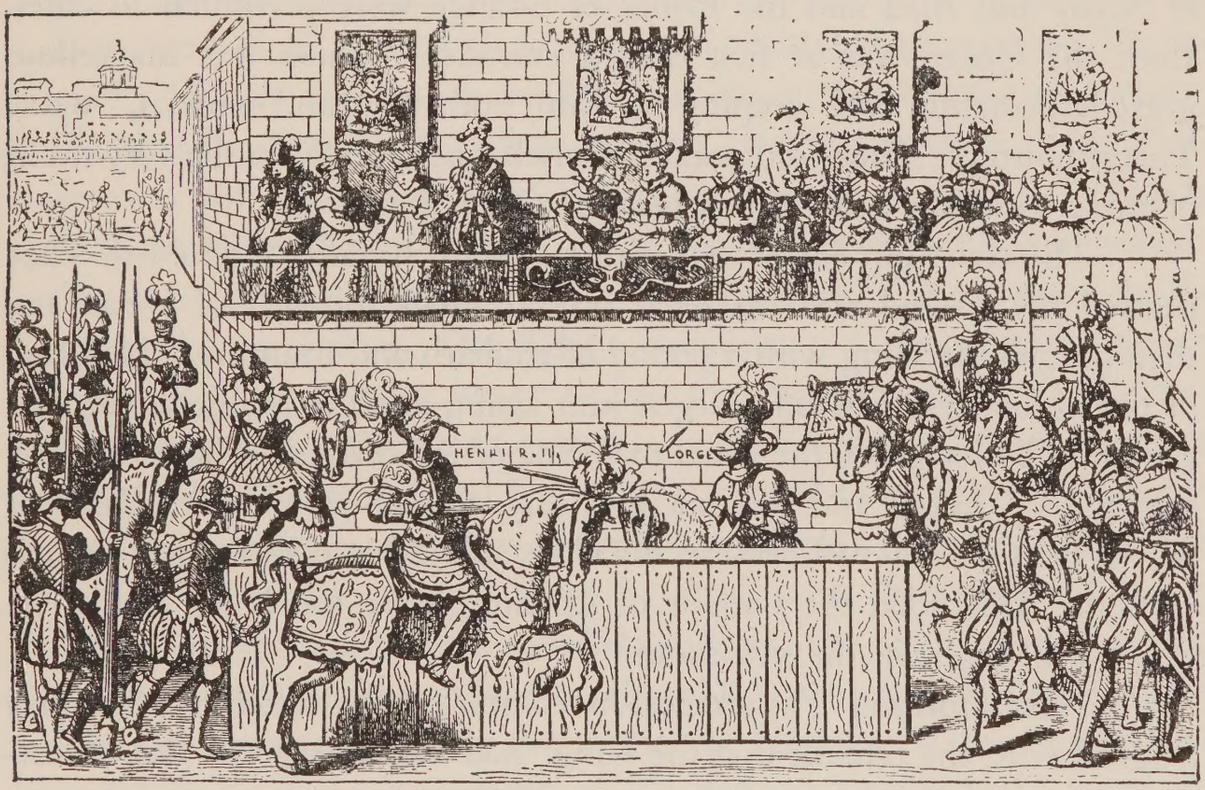

Figure 2—The fatal joust between Henry II and the Comte Mongonmery before the Hôtel des Tournelles. From the engraving by Tortorel and Périssin, 1570.

[18] Vesalius in his *Relation* given below, says that Henry mounted the steps to his chamber, scarcely tottering.

[19] Despite Henry's pardon, Mongonmery was banished to his estates in Normandy after the King's death. There he whiled away his boredom by the study of religious controversy and ended up as a convert to the reform movement. As a result he participated in the religious wars in France, barely escaped with his life from Paris during the massacre of St. Bartholomew and sought refuge in England. From there he organized several attacks on the French coast. In 1574 he landed with English volunteers in Normandy where he was besieged by a large French force and compelled to surrender. The Queen-mother and widow of Henry II, Catherine, held the most violent hatred of her husband's unwitting assassin, and on June 26 brought about his condemnation on a charge of high treason. L'Estoile in his *Journal* declares that Catherine herself witnessed the decapitation and quartering. Mongonmery, however, had become a person and a symbol of such importance that one of the clauses of the Peace of Monsieur, in February 1576, specifically declared that this execution was a miscarriage of justice.

The Constable took one arm of the fallen King, the Cardinal of Lorraine and François de Guise the other, the Prince of Condé and M. de Martigues the legs, while M. de Sancerre supported the head. In this fashion Henry was carried to the Hôtel des Tournelles. But at the base of the staircase Henry "displaying the courage and vigour of a true king," requested to be allowed to ascend on foot, and he accomplished this with some assistance.[20]

As soon as the King had entered, the gates were closed and closely guarded. The servants of the nobility were ordered to remain at a distance, and of the many distinguished foreigners, at first only the Dukes of Savoy and Alva and the Prince of Orange were permitted to enter. Even the Queen was at first denied entrance. "There was marvellous great lamentation and weeping for him, both men and women," wrote Throckmorton. "Thus God makes Himself known, that in the very midst of these triumphs suffers such heaviness to happen."[21]

The court physicians and surgeons were speedily assembled. They dressed the wound and extracted several small splinters of wood and then purged the King with a potion of rhubarb and mummy,[22] bled him of twelve ounces of blood, purged him again, applied refrigeratives, and gave him barley-gruel, the usual medicine of the feverish. The King sank into a deep stupor and did not give any sign of pain.[23] The Duke of Savoy, the Cardinal of Lorraine, the Constable Montmorency and Francis of Guise demanded the honour of watching over the King and so remained all night in the sick-room.[24]

Next morning Throckmorton completed his letter to the Privy Council with the remark that the King "had had a very evil rest, whereof there was great lamentation at court."[25] But Montmorency, who wrote to Queen Elizabeth during the night, gave a more favourable estimate: "The wound is very severe, but the first and second dressing give good hope that the result will be satisfactory, and that the worst that can happen will be the loss of the eye."[26] The same opinion was expressed in a letter

[20] Romier (Note 4) p. 380, citing numerous ms. accounts.

[21] Forbes (Note 6), p. 151, Throckmorton to the Privy Council, July 1, 1559.

[22] Luigi de Gonzaga to the Duke of Mantua, Paris, July 1: "Hor messo in letto, gli medici de liberorno di darci una medicina pi reubarbo et momia et ucolepo rosato, se ben mi raccordo, laqual tenuta tre o quatro hore la vomitò tutta." Cited from the ms. by Romier (Note 4), p. 382.

[23] See the *Relation* of Vesalius below.

[24] Forbes (Note 6), p. 152, Throckmorton to the Privy Council, July 1, 1559. Catherine appears to have been admitted later, and the Queen, the Duke of Savoy, and the Cardinal of Lorraine shared the honour of watching over Henry until three o'clock in the morning when the other privileged persons relieved them. Gonzaga in the letter cited, Romier (Note 4), p. 383.

[25] *Ibidem.*

[26] *Calendar of state papers, foreign series,* Elizabeth, I, p. 345.

of Anne of Cossé to the Marshal Brissac, written after the wound had been dressed on July 1: "At ten o'clock [in the morning] the wound was dressed and found to be better than was thought possible. However, it is believed that he will lose the eye . . . but one can not yet judge with certainty."[27]

After the wound had been dressed, at eleven o'clock the King was given nourishment although he had no appetite for food. He then fell into a deep sleep and awakened at intervals only long enough to satisfy his thirst. His pulse rate was only slightly accelerated, and the slight fever which he had had hitherto lessened at four in the afternoon.[28]

Immediately after the accident gentlemen of the court had been dispatched in all directions to seek out celebrated physicians. "As soon as His Majesty was struck, the Duke of Savoy dispatched a messenger to Flanders for Vesalius, the great surgeon, who arrived here today."[29] The news of the accident reached Philip in Brussels on July 2. "They had immediately sent to the court of the King's Majesty, our sire, which at that time was in Flanders, for Doctor Vesalius."[30] Meanwhile in Paris optimism was fading. The King's condition was showing no improvement, and the surgeons began to fear that the blow had torn the coverings of the brain. A consultation was held in which all possible methods of treatment were explored,[31] and the stump of Mongonmery's lance was used for experimental thrusts at the heads of four criminals who had been decapitated on the previous day; the skulls were then dissected, but this grisly empirical procedure failed to indicate the secret of the wound.[32] On the fourth day the patient developed a violent fever which, says Vesalius, was thwarted by purgative medicines. However, a delirium followed, and little by little indications of the damage to the brain made their appearance.[33]

The initial consultation attended by Vesalius was enlivened by the asinine remarks of an ignorant Spanish surgeon who had accompanied Vesalius on his journey from Brussels. This gentleman had been serving the court in the position of temporary alcalde and on hearing the news

[27] Ruble (Note 8), p. 431. During the dressing the Dauphin was brought into his father's presence and promptly proceeded to faint twice, thus, no doubt, adding to the tribulations of the attendant physicians.

[28] Gonzaga to the Duke of Mantua, letter cited. Romier (Note 4), pp. 383-384.

[29] G. Roviglio to the Duke of Ferrara, Paris, July 3. Romier (Note 4), p. 382.

[30] Dionisio Daza Chacon, *Practica y teorica de cirugía en romance y en latin* (Madrid, 1678), I, p. 174.

[31] In the *Relation* of Vesalius below.

[32] Vieilleville (Note 11), p. 283.

[33] In the *Relation* of Vesalius below.

of Henry's accident had importuned the court favourite to send him to Paris to participate in the treatment of the King. The protomedicus, Jean Chapelain, taking him to be a surgeon of considerable consequence, had reserved for him the place of honour by requesting him to give his opinion last. At the conclusion of the ceremony, the attendant physicians and nobles waited, "like the Carthaginians when Aeneas wished to speak from the throne," for the profound and wise discussion to be anticipated from such a distinguished master of the art. The unfortunate surgeon, knowing little Latin and no French, proceeded to give his opinion in a mixture of Spanish and barbarous Latin saying things which were better left unsaid, and "the French were in such a state that they did not know whether they saw it or whether they were dreaming it, because, although they saw it, they could not believe it."[34]

Vesalius reached Paris on the 3rd, and according to Adam Henricpetri, "as soon as he entered the King's chamber, he made trial with a clean white cloth which he put in the King's mouth [to bite] and then pulled it out with some force; whereupon the King threw his hand to his head and cried out from the pain. By the depth of the pain Vesalius was able to judge that he would not recover. *Chironium vulnus,*[35] he said, a wound that will not heal."[36]

With the arrival of Vesalius, who was put in charge of the case,[37] a second consultation became necessary.

> Having reached his destination, he saw the wound of the king, and it was decided to hold a consultation over the matter. There were many very distinguished physicians and surgeons, all very learned in Latin and Greek, and skilled in surgery. It is customary there that when the physicians gather to treat some sickness, especially in the case of a royal personage, they all sit down and the Chaplain,[38] as we would say here Protomedicus, attends and orders whomever he thinks should give his opinion; and to honour Doctor Vesalius and his companion, he left them to speak last. The French began to speak . . . So Vesalius gave his opinion with that Latin and with that facility which I have seen in many consultations (which I have had

[34] Daza Chacon (Note 30), I, pp. 174-175.

[35] The Telephian or Chironian wound was one which could not be cured. Chiron, praeceptor of Achilles in medicine, was however skilled in its treatment and passed on the secret to his pupil. Telephus, son-in-law of Priam and King of Mysia, was wounded by Achilles' famous spear which was able "to kill and cure." On learning from an oracle that he could be cured only by his adversary, he sought out the Greek warrior and agreed to lead his enemies to Troy in exchange for treatment. "Vulnus Achillaeo quae quondam secreat hasti, Vulneris auxilium Pelias hasta tulit." Ovid.

[36] Max H. Fisch, "Vesalius in English State Papers," *Bulletin of the Medical Library Association,* 1945, *23,* 244-245.

[37] *Calendar of state papers, foreign series,* Elizabeth, I, p. 364.

[38] Daza Chacon confused the position with the man. It was Henry's first physician, Jean Chapelain, to whom reference is made here. It was also Chapelain who had summoned Paré to the case.

with him) and treated of the essence of the wound, the signs and prognoses, and the treatment of it which a good surgeon would be obliged to observe, and all with such wisdom that it was no wonder that all were very satisfied and admiring.[39]

Not only did Vesalius have the direction of the case, which no doubt carried with it considerable nervous strain in view of the momentous issues at stake, but he was doubly burdened by importunate courtiers. In particular, the death of Henry could well mean the ruin of the Montmorency family, and for this reason if for no other, the Constable had an especial interest in the case. "The Constable is so curious about the King's accident that he caused the body of an unfortunate man who was assassinated yesterday to be preserved until the arrival of Vesalius, and he wished the latter to show him in the dead man's head the anatomy of the King's injury."[40]

However, the King's condition was becoming obviously worse, and his doom was apparent to all. Vieilleville recounts that on the 8th Henry had an interval of consciousness, during which he sent for the Queen and ordered her to hurry on the marriage of his sister, and that he then made her sign Vieilleville's brevet of marshal, which he had intended to sign himself, and commended to the Queen his kingdom and his children.[41] However, no mention of this scene occurs in the other contemporary accounts, and it would seem that by this time the King must have been unable to talk to anyone. However, whether by Henry's direction or otherwise, the marriage was celebrated at midnight in the little church of Saint-Paul which adjoined the Hôtel des Tournelles. The ceremony was particularly lugubrious, and those in attendance seemed more like mourners at a funeral, which no doubt was more in their thoughts than the marriage.[42]

Since all hope had now been abandoned, Paris became a city of mourning. Queen Catherine ordered public prayer for Henry and forbade the ringing of bells.[43] On the 9th the parochial clergy of Paris organized a general procession for the King's recovery, and on the same day the last sacraments were administered. The Bishop of Toulon, Jerome de la Rovère, stated in his funeral sermon that after receiving the sacraments, the King summoned the Dauphin and "recommended to him his church

[39] Daza Chacon (Note 30), I, p. 175.

[40] G. Roviglio to the Duke of Ferrara, Paris, July 3, ms. cited by Romier (Note 4), pp. 384-385.

[41] Vieilleville (Note 11), p. 284.

[42] *Ibidem.*

[43] *Oeuvres complètes de Pierre de Bourdeille, Seigneur de Brantôme. Publiées . . . pour la Société de l'histoire de France par Ludovic Lalanne* (Paris, 1873), VII, p. 349.

and his people, and declared that he persisted and remained firm in the faith in which he was dying."[44] But this pious story must be suspect since it is doubtful if Henry was now capable of lucid thought or speech.

Desperate remedies were now in order, and during the evening the physicians once again discussed the possibility of trephining. But as night drew on the King, ever more enfeebled, broke out in a profuse sweat, "the sweat of death," which was to last throughout the night and which

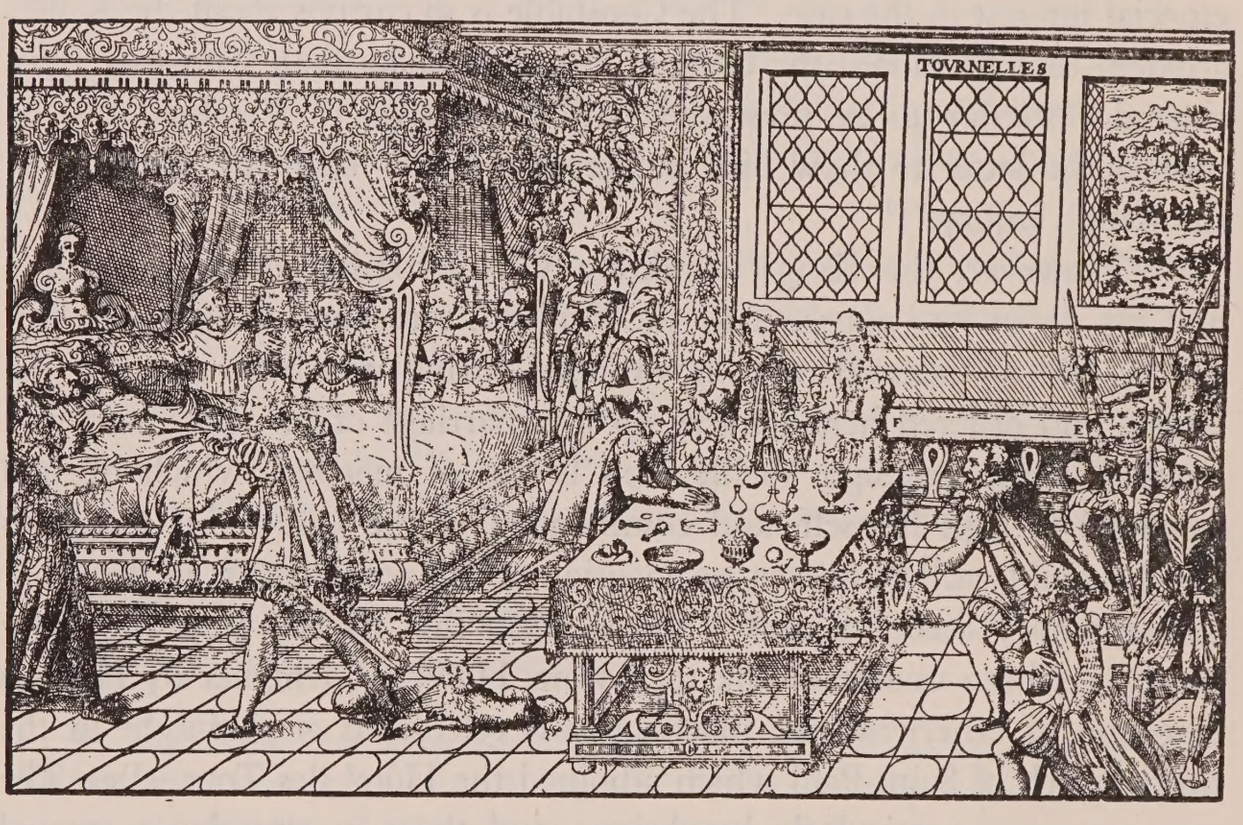

Figure 3—The death-bed scene of Henry II from an engraving by Tortorel and Périssin *circa* 1570. In the background on the left, the Cardinal of Lorraine, the Constable of France, Catherine de' Medici and the Dauphin may be identified. In the center background three of the physicians, presumably Jean Chapelain, Andreas Vesalius, and Ambroise Paré from left to right. It has been suggested, with more possibility than probability, that the figure in the foreground holding the cloth is Vesalius about to carry out the test mentioned in the text.

convinced them that all remedies would be in vain.[45] Prior to his death, Henry's left side suffered from a paralysis while the right was shaken by violent convulsions. Respiration became more difficult, and finally death

[44] Ruble (Note 8), pp. 329-330.

[45] G. Roviglio to the Duke of Ferrara, Paris, July 9, ms. cited by Romier (Note 4), p. 388.

appeared, hastened, according to Vesalius, by a draught of wine which had been concocted with sage and other irritating substances. Henry, just forty years old and in the twelfth year of his reign, died at one o'clock in the afternoon.[46]

* * *

Vesalius had arrived on the 5th day after the King had been injured. It should be noted that immediately after the accident a messenger had been sent to summon Vesalius who was ordered to leave for Paris by special coach. When we consider that among the physicians in Paris was the great Paré, the summons and the fact that Vesalius was placed in charge of the case upon his arrival should be sufficient indication that his reputation in Europe was now supreme. However, he was unable to restore the French king, and, indeed, as the postmortem indicates, that was a task beyond mortal ability. Yet despite this failure, if in justice to the medical art of the sixteenth century it can be called failure, the presence at the autopsy of the greatest anatomist of that day meant that it would be as searching and as complete as sixteenth-century knowledge permitted.

Vesalius' *Relation* or account of the postmortem examination seems curiously to have been overlooked, and our knowledge of the cause of death of Henry II has in recent times been based upon the brief account of Paré.[47] We have, therefore, in the following, not only a more extended and searching description but one more precious fragment of Vesalian literature.

[46] In the *Relation* of Vesalius below.

[47] "A great part of these accidents appeared in King Henry of happy memory, a little before he dyed. He having set in order the affairs of *France,* and entered into amity with the neighbouring Princes, desirous to honour the marriages of his daughter, and sister, with the famous noble exercise of Tilting, and he himself running in the Tilt-yard, with a blunt-lance received so great a stroak upon his Brest, that with the violence of the blow, the vizour of his helmet flew up, and the trunchion of the broken Lance hit him above the left Eyebrow, and the musculous skin of the Fore-head was torn even to the lesser corner of the Left Eye, many splinters of the same Trunchion being struck into the substance of the fore-mentioned Eye, the Bones being not touched or broken; but the Brain was so moved and shaken, that he dyed the eleventh day after the hurt. His skull being opened after his death, there was a great deal of bloud found between the *Dura,* and *Pia Mater,* poured forth in the part opposite to the blow, at the middle of the Suture of the hind-part of the Head; and there appeared signs, by the native colour turned yellow, that the substance of the Brain was corrupted, as much as one might cover with ones Thumb. Which things caused the death of the most Christian King, and not only the wounding of the Eye, as many have falsly thought. For we have seen many others, who have not dyed of farr more grievous wounds in the Eye." Paré (Note 2), X, ix, 249.

[RELATION OF ANDREAS VESALIUS ON THE DEATH OF HENRY II][48]

[July 1559]

The tragic termination of the royal injury

On Friday in a public passage of arms, Henry the most Christian King of France, received from the lance of a certain young man a direct thrust a little below the root of the neck upon the side armour commonly employed in single combat. The lance was broken through its wooden stock by the impact in such a way that on striking the part of the helmet lying below the eyes, which on that occasion was open, it drove upwards as if by a second thrust into the face of the king, while the remainder of the lance, which was still held in the hand of the noble, was shattered into splinters.

The lance first struck the middle of the eyebrows, the root of the nose and the internal part of the left eyebrow. From here it advanced in a continuous course through the lower part of the whole of the right eyebrow to the temples and, by means of many splinters similar in size, so insinuated itself between the body of the eye and the socket by which the right eye is contained in the skull, that the greatest impact was sustained by the socket itself. Its lateral wall was peppered with many splinters[49] and there the lance settled, burying and concentrating itself in varying degree, which undoubtedly caused the very great concussion of the brain.

With the reception of the wound, the king was seen to roll first to one side and then to the other, but eventually managed to keep his saddle by his own efforts. When he had slipped to the ground and was surrounded by spectators running forward from the crowd, he showed a loss of consciousness, although he later ascended the steps to his chamber with hardly a totter.[50]

After some half-dozen splinters of the lance which enclosed his eye, especially on the outer side, had been avulsed from the wound by hand, he vomited his dinner and likewise, later, a small portion of the potion of rhubarb and mummy[51] which

[48] This relation written by Vesalius, probably after his return to Brussels, is known only through a sixteenth-century copy preserved in the Bibliothèque Nationale at Paris. It was a transcription of this latter manuscript which was printed by Ruble (Note 8), pp. 432-435.

[49] Two of the splinters removed from the King's orbit were illustrated, one, in a letter from Luigi de Gonzaga to the Duke of Mantua, Paris, July 1, 1559, and the other, in the correspondence of the Bishop of Fermo to the Cardinal of Naples, Paris, June 30, 1559. The larger of these measures 3¾ in. (9.5 cm.) by ⅜ in. (1 cm.), and is extremely jagged at either end. The smaller splinter is approximately 2¾ in. (7 cm.) by ⅛ in. (0.4 cm.). *Cf.* Romier (Note 4), p. 380.

[50] This statement is supported by the account of Alfonso d'Este to the Duke of Ferrara, cited from the ms. by Romier (Note 4), p. 381: "Montando la scala S. *Mtà* hà sempre mutato i piedi di grado in grado da lei medesima, sendo pero sostenuta della testa, delle braccia et del busto, monstrando cuore et vigore veramente da re."

[51] In the sixteenth century and long after, mummy was the standard ingredient in remedies used for the treatment of bruises and contusions of various kinds. The material was very expensive and great powers were ascribed to it. Its exact nature was the subject of considerable dispute. The true mummy was supposed to be the concreted mass of resinous materials and organic remains derived from the sarcophagi of Egypt, but as with so many other remedies of this nature, substitution and fraud were the general rule. The Arabs, such as Serapion and Avicenna, held that it was ambergris, others contended that it was nothing but asphalt from the bodies of the poorer people of Egypt who could not afford to be embalmed with more expensive spices. Paré is usually credited with denouncing this ancient drug although there were many others of his time who also questioned its value. Commenting on the frauds and uselessness of mummy, Paré says, "Which

Infelix Regii Vulneris Successus

Die veneris, Henericus christianissimus Gallorum rex, in publico hastarum concursu, juvenis cujusdam lanceam recta inductam, paulo infra jugulum, supra latrorum [laterum], illis armorum partem solis fere concursibus servientem, recepit. Lancea, impetu illo per transversum brassicae caudicis in modum effracta, et insultu suo galeae partem, quae oculis subjicitur, sursum agens in patentem ea occasione regis faciem, veluti secundo ictu, reliqua sui, quae in nobilis illius manu continebatur, portione illisa fuit.

Tetigit autem, primum mediam superciliorum partem, nasique summum et internum sinistri supercilii finem, et hinc per infernam supercilii dextri partem universam ad tempora usque continuo ductu est progressa, in aequabilibus suis et pluribus finibus, sese inter oculi corpus et sinum, quo oculus dexter in calvaria continetur, ita insinuans, ut summum impetum in sinum illius, externum latus moliens pluribus frustulis, inibi subseterit seseque varie involverit collegeritque, mira indubie facta cerebri concussione.

Suscepto vulnere, rex modo in hoc, modo in aliud latus provoluturus videbatur, sed tandem sponte sua rex se continuit, et in terram jam dimissus, et spectantium accurentiumque turba obrusus, animi quaedam deliquia ostendit, etsi interim gradus sui cubituli vix postea titubans ascenderit.

Quum manu lanceae frustula plus minus sex, quibus oculus latere potissimum externo septus erat, ex vulnere evulsa essent, vomuit eaquae in prandio sumpserat, uti postea et potionem ex rhabarbaro et mummia, a modicis oblatam, et dein rursus pituitosa quaedam sanguinis magna copia ex vulnere profluxit et ex ani venis notatu dignam portionem

eodem die emiserat, et venae sectione unciae plus minus duodecim fuerunt eductae, et tenuis febricitantium victus institutus est, et alvi subductiones tentatae, et decocta quae sanguinem refrigerant, ipsiusque impetum prohibent, propinata.

Sopor quidam obrepsit, et nunquam fere rex, tam graviter et in exquisitissimi sensus parte laesus, ullius doloris meminit animalibusque et precipue animae viribus utrumque stupere visus est, nulla interim occurente adhuc febre. Quum succedentibus diebus vulnus a medicis tractabatur, et ex dicta oculi sinus sede per intervalla lignorum fibrae et frustula continuo evellerentur, et os ex ictu, membrana sua inibi nudum ac asperum videbatur, dicti prius vomitus, illius soporis ac conturbationis in capitis ictu, ita a medicis habebatur ratio, ut cerebri substantiae concussionis, et fractarum illic venarum incideret suspicio: verum etsi medicorum nonnulli cum ipso regi adstantibus proceribus, haec in melius interpretabantur et eam, quam minime in tanto rege optaverant cerebri noxam fateri nollent, diligenter tamen inter medicos actum fuit, ecquo tandem morbo, cerebri noxae, succursi posset, si forte quaepiam esset. Atquae ita de calvariae terebrationis usu et variis, quae subinde occurrunt, calvariae fracturis, et sanguinis inter calvariam et duram cerebri membranam natura diffusi est actum, et postremo illam itum est sententiam, ut terebra nihil promoveri posse omnes existimarent.

Febris dein ad quartae diei initium sese prodidit, quae cum nonnullis cerebri noxam arguere videretur, in putridam tamen a complurimis est relata, quae ex malis in genere venoso potius succis, quam ex vulnere aut cerebro penderet, habita hic cognitionis habitus regii et urinarum ratione. Quum hinc febri purgantibus medicamentis feliciter occurrebatur, delirium sese protulit. Itaque sensim offerentibus se indiciis de cerebri ipsiusque membranae vitio plenius constare cepit, sicque exigua

auxiliorum spes obrepsit, aucto nimirum in dies delirio, et manifestis se offerentibus signis, et frequentibus illis et inaequalibus rigoribus ac sudoribus, quibus articulorum et capitis vulneribus, perituros videmus esse obnoxios.

Hic prolixius narrare nolo quam sedulo, et vulnus undique dehiscerit, et ossiculorum squammis† et lignorum frustulis emittendis aptum esset, et habita sit consideratio, et quae serosis oculi palpebrarumque tumoribus remedia fuerint adhibita; eaque tantum subjiciam, quae, mortuo jam rege, fuerunt observata.

Sinister oculus, et si immense jam intumuerat, et visum integrum obtinebat, ita quod nulla alias solutione continui divexatus fuit. Calvariae os in fronte undique illoesum et intactum sese exhibuit, etiamsi frons odematosum tumorem prae se ferebat. Superior nasi ossis pars minime nuda fuit, et potius contusione, quam nuda attritione attacta. Externum dextri oculi sinus latus, prorsus membrana detectum fuit et asperum, et in intima posticaque sede magnam adhuc lignorum veluti stipitum vim continebat, qui veluti in circulum ita fuerant acti, ut inter sinum illum et infimam oculi sedem magna e parte subsisteret et apiculis quibusdam, duram oculi tunicam penetraverint, ut in ipsa frustula quaedam occurrerent tam procul videlicet a superiore sinus parte, et ab anteriore oculi regione, quae alias continentibus et videntibus videbatur esse illaesa et integra.

Cerebri membranae, ipsumque adeo cerebrum ad frontem et ad dextri oculi sinum ubi alias quis quid praeter naturam asservatum credidisset, apparuerunt integerrima, et undique dura membrana inculpata videbatur. Verum in vertice nonnihil ad posteriora, cerebri sinistra pars, quae dextrae est contermina, ad unius digiti longitudinem et duorum latitudinem, flavum

† Sequestra

cum adnexa sibi tenui membrana, colorem retulit, prorsus ad pollicis usque profunditatem putrea et jam suppurata, et universa pars sinistra, seroso veluti icore plena et defluens haud secus cernebatur quam si proxime universa in putrilaginem, vel quampiam gangrenam esset ducenda.

Sede illa, qua suppuratio consistebat, dura membrana videbatur, vasa habens quam alibi magis distenta ac subnigra; verum inter hanc et calvariam sanguinis gruinosi nonnihil occurrebat. Calvaria et cutis quae jam prius ad conjecturam, scilicet fuerat rasa, nihil praeter naturam referebat, aliquando tamen ea regi vulnus, ut cicatrix docebat, fuit infectum, atque ita putredo haec cerebrum ad calvariam potius collisum ac in se concussum conturbatumque fuisse, quam quod calvaria id ostendisset, comprobat.

Porro haud omittendum est sinistrum crus et brachium item sinistrum ante mortem resolutionem ostendisse, cum interim longae convulsionis notae tota dextri lateris regione ubertim conspiciebatur.

Vomitus nunquam amplius invasit et semel atque iterum tantum singultus exauditus est. Respiratio admodum fuit postremis temporibus difficilis, observatusque promptum fuit quam aegre sinistrum thoracis latus fuerit sequax.

Videtur mors, quae die lunae, hora prima pomeridiana obvenit, sub undecim scilicet diem, hac occasione fuisse accelerata, quod procerum quorundan suasu, rex vinum assumpsisset, cui salvia cum aliquot impensius calefacientibus fuerat incocta, et vulnerariae potionis titulo propinabatur, impensaeque respirationis necessitatem auxerat.

ANDREAS VESSALIUS
BRUXELLENSIS

had been given to him. Then again a large quantity of pituitous blood flowed from the wound, and on the same day he passed a significant amount from the anal veins. About twelve ounces were withdrawn by venesection, and a slender anti-febrile diet was instituted with trial subductions of the bowels and decoctions prepared to cool the blood and lessen its force.

A lethargy overcame him, and the king, although gravely wounded in a part of such exquisite sensibility, almost never mentioned any pain and seemed to be benumbed in both his animal and especially in his vital strength.[52] However no fever had as yet appeared. On the following days, when the wound was treated by the physicians, fibres and splinters of wood were constantly being extracted at intervals from the previously mentioned region of the eye-socket. As a result of the blow, both the bone and its membrane, in that place, were seen to be bare and rough. A consultation was held by the physicians as it was suspected that concussion of the brain and in that case, rupture of the veins, as well as the contusion from the blow on the head, were the cause of the vomiting first mentioned and the lethargy, although some of the physicians with the attendant nobles to the king himself, interpreted matters more optimistically and were unwilling to acknowledge any damage to the brain, an injury they were loathe to admit in so great a king. Nevertheless the physicians carefully considered whether the damage to the brain, if it were perhaps present, could be countered in some manner. And so they discussed the use and various methods of trephination of the skull and things which occur therein, fractures of the skull, and the nature of the blood diffused between the skull and dural membrane of the brain. Finally a general conclusion was reached, and all agreed that trephination could promise nothing.

Then, with the beginning of the fourth day, fever appeared, which, although to some seemed to indicate damage to the brain, yet by most was considered due to putrid material which in a venous type resulted from bad humours rather than from the wound or from the brain. This reasoning was based upon knowledge of the royal constitution and judgment of his urines.[53] Although purgative remedies happily thwarted the fever, delirium appeared. And so, little by little, the appearance of signs began to indicate more fully the damage to the brain and its membranes, and thus

thing sometimes moved certain of our *French* Apothecaries, men wondrous audacious and covetous, to steal by night the bodies of such as were hanged, and embalming them with salt, and drugs, they dryed them in an Oven, so to sell them thus adulterated in stead of true Mummie. Wherefore we are thus compelled both foolishly and cruelly to devour the mangled and putrid particles of the carkasses of the basest people of *Egypt,* or of such as are hanged, as though there were no other way to help or recover one bruised with a fall from a high place, than to bury man by horrid insertion in their, that is, in mans guts." Paré (Note 2), XII, vii, 314-315. Matthiolus, *Dioscorides* (Venetijs, 1558), LXXV, 88-89.

[52] In the humoral doctrine there were three fundamental spirits or pneumata: natural, vital, and animal. The natural spirit was elaborated in conjunction with the chyle from the alimentary tract, in the liver. From here it was carried by means of the veins to the several organs in order to assist in the concoction of the nourishment utilized by the tissues. Some of this spirit passed to the left heart where it met with the pneuma drawn in by the lungs and was still further refined into the vital spirit. The vital spirit was in turn carried by the carotid vessels to the brain where it was transformed into a still higher form of ethereal substance called the animal spirit. The force, strength, or faculty of these spirits provided, so to speak, the motive power for metabolism, cardiovascular, and nervous system function, respectively.

[53] "Hà urinato, et gli medici, che conoscono la loro complessione, dicorno che veramente la urina è un pocho alterata, ma che sole nella sua bona sanità farne di simili, non lasciando pero di dire che dopoi la botta hauta finhora il polso è stato un pocho alterato, pero come niente." Letter of Gonzaga, cited by Romier (Note 4), p. 384.

any slender hope of assistance evaporated. With the daily and unquestionable increase of the delirium, the appearance of obvious signs, and irregular sweats and rigors, both of which were frequent, we saw that the injuries to the sutures and wounds of the head were going to be fatal.

I do not wish to speak here more prolixly than care requires. The wound gaped on all sides and was favourable for the shedding of osseous squames [sequestra] and the splinters of wood, and consideration was given to the remedies which had been applied to the serous swellings of the eye and eyebrows. I shall only add those things which were observed after the death of the king.

Despite the fact that the left eye was immensely swollen, vision was intact, so that he was not otherwise affected by a solution of continuity. The bone of the skull in the frontal region appeared to be everywhere uninjured and intact, although there was an oedematous swelling of the forehead. The superior part of the nasal bone was not at all bare and had suffered from contusion rather than being bared by attrition. The external side of the socket of the right eye was completely denuded of membrane and was rough. Its innermost and posterior aspect still contained a large quantity of wood which, like stakes, had been driven, as it were, in a circle, so that the greater part of it occupied a position between the socket and the lower aspect of the eye. By their apices they penetrated the hard covering of the eye so that small pieces extended as far as the superior part of the socket and anterior region of the eye, which otherwise in content and appearance seemed uninjured and intact.

The membranes of the brain and the brain itself at the forehead and at the right socket of the eye, which under any other circumstances one would have believed to be preternaturally preserved, appeared quite unharmed and the dural membrane seemed everywhere uninjured. But at the vertex somewhat posteriorly, the left part of the brain which is bounded to the right, together with the thin membrane attached to it, possessed a yellow colour for the length of one finger and the width of two and was putrid and had suppurated straight down to the depth of a thumb. The whole of the left part was observed filled with a serous ichor-like fluid which flowed away not otherwise than if the whole had been recently caused by putrefaction or some sort of gangrene.

In the region where the suppuration occurred, the dural membrane was observed as having vessels which were more distended and blackish than elsewhere, but between this structure and the skull there was some grumous blood. The skull and the skin, which, as may already be conjectured, that is to say, had been scraped off, showed nothing abnormal, although at some time as a scar indicated, a wound of the king had been infected. And so this putrid condition gave proof that the brain had collided with the skull and was concussed and shocked by it, and not that the condition was caused by an injury to the skull.

It should not be omitted that the left leg and arm showed before death a left paralysis while a convulsion of long duration was plainly observed on the whole right side. Never again did vomiting occur, and again and again only a rattling in the throat was audible. Towards the end respiration was very difficult, and on observation it was clear that the left side of the thorax yielded with difficulty.

Death occurred on Monday in the first hour of the afternoon, that is to say, on the eleventh day, and it had been accelerated for the reason that, at the persuasion of some of the nobles, the king had been given some wine to which sage with some

very strong calefacients had been added; a prescription which had been prepared as a potion for wounds. This had increased the necessity for strong respiration.
—Andreas Vesalius of Brussels.

From the account of Andreas Vesalius and other contemporary reports, we obtain a classical picture of cerebral compression supervening on concussion following a contre-coup injury to the brain and subdural haemorrhage. The initial vomiting and restlessness, the gradual loss of consciousness, the slow pulse, stertorous breathing and rise of temperature, and finally the focal symptoms of spasmodic jerkings and paralysis, presaged a fatal issue which could not be long delayed. The test employed by Vesalius, as described by Henricpetri, would seem to have been an original but somewhat severe method of eliciting the head flexion sign used in the diagnosis of meningitis and is, so far as we are aware, the first test of this nature to be described. The question as to whether the brain could be injured without a frank fracture of the skull was, in the sixteenth century, a matter of considerable dispute, and no doubt the reason why trephination, which might have offered a slim chance of success, was not employed on this occasion. It is therefore of great interest that not only does Vesalius emphasize in his report that the autopsy proved that cerebral injury does occur by such a mechanism, but Ambroise Paré specifically cites this case to re-establish and uphold once again the truth of ancient Hippocratic observation. There are minor discrepancies to be found in the versions of Paré and of Vesalius, but these may be excused in the former, as a lapse of memory from the passage of several years, and in the latter, from the very obvious hastiness of construction of the report.

It is to Vesalius we owe the introduction of observational science. He had long appreciated the importance of systematic examination of morbid lesions and the necessity of following the progress of disease to its termination in order to understand the pathological process. In this connection, more than a dozen years before, he had written, "I think I shall never fail to seize the opportunity of examining any bodies which are brought to my attention."[54]

[54] Vesalius (Note 7), p. 176.